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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Thomas M. Jessell et al.  
Serial No. : 09/554,462 Group Art Unit: 633  
Filed : September 1, 2000  
For : GENETIC DEMONSTRATION OF REQUIREMENT  
NKX6.1 AND NKX2.2 IN VENTRAL NEURON  
GENERATION

RECH CENTER 1600 2900

RECEIVED

1185 Avenue of the Americas  
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October 23, 2001

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

INFORMATION DISCLOSURE STATEMENT

In accordance with their duty of disclosure under 37 C.F.R. §1.56, applicants direct the Examiner's attention to the following references which are listed on the PTO-1449 form attached hereto as **Exhibit A**. Copies of these references are attached hereto as **Exhibits 1-28** respectively.

1. Anderson, S.A. et al., (1997) "Interneuron Migration from Basal Forebrain to Neocortex: Dependence on DLx Genes" Science 278:474-476 (**Exhibit 1**);
2. Arber, S. et al., (1999) "Requirement for the Homeobox Gene Hb9 in the Consolidation of Motor Neuron Identity" Neuron 23:659-674 (**Exhibit 2**);
3. Briscoe, J. et al., (1999) "Homeobox gene Nkx2.2 and specification of neuronal identity by graded Sonic hedgehog signalling" Nature 398:622-627 (**Exhibit 3**);
4. Briscoe, J. et al., (2000) "A Homeodomain Protein Code Specifies Progenitor Cell Identity and Neuronal Fate in the

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Ventral Neural Tube" Cell 101:435-445 (Exhibit 4);

5. Burrill, J.D. et al., (1997) "PAX2 is expressed in multiple spinal cord interneurons, including a population on EN1 interneurons that require PAX6 for their development" Development 124:4493-4503 (Exhibit 5);
6. Chu, H. et al., (1998) "Formation and specification of ventral neuroblasts is controlled by vnd in Drosophila neurogenesis" Genes & Dev. 12:3613-3624 (Exhibit 6);
7. Ericson, J. et al., (1997) "Graded Sonic Hedgehog Signaling and the Specification of Cell Fate in the Ventral Neural Tube" Cold Spring Harb. Symp. Quant. Biol. 62:451-466 (Exhibit 7);
8. Ericson, J. et al., (1996) "Two Critical Periods of Sonic Hedgehog Signaling Required for the Specification of Motor Neuron Identity" Cell 87:661-673 (Exhibit 8);
9. Ericson, J. et al., (1997) "Pax6 Controls Progenitor Cell Identity and Neuronal Fate in Response to Graded Shh Signaling" Cell 90:169-180 (Exhibit 9);
10. Goulding, M.D. et al., (1991) "Pax-3, a novel murine DNA binding protein expressed during early neurogenesis" EMBO J. 10:1135-47 (Exhibit 10);
11. Hammerschmidt, M. et al., (1997) "The world according to hedgehog" Trends Genet 13:14-21 (Exhibit 11);

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12. Hebrok, M. et al., (1998) "Notochord repression of endodermal Sonic hedgehog permits pancreas development" Genes & Dev. **12**: 1705-1713 (Exhibit 12);
13. Inoue, H. et al., (1997) "Isolation, characterization, and chromosomal mapping of the human Nkx5.1 gene (NKX6A), a new pancreatic islet homeobox gene" Genomics **40**:367-370[(Exhibit 13);
14. Lumsden, A. et al., (1996) "Patterning the Vertebrate Neuraxis" E. Science **274**: 1109-1114 (Exhibit 14);
15. Matise, M.P. et al., (1997) "Expression Patterns of Development Control Genes in Normal and Engrailed-1 Mutant Mouse Spinal Cord Reveal Early Diversity in Developing Interneurons" J. Neurosci. **17**:7805-7816 (Exhibit 15);
16. McDonald, J. A. et al., (1998) "Dorsoventral patterning in the Drosophila central nervous system: the vnd homeobox gene specifies ventral column identity" Genes & Dev. **12**:3603-3612 (Exhibit 16);
17. Pabst, O. et al., (1998) "Nkx2-9 is a novel homeobox transcription factor which demarcates ventral domains in the developing mouse CNS" Mech. Dev. **73**: 85-93 (Exhibit 17);
18. Pattyn, A. et al., (1997) "Expression and interactions of the two closely related homeobox genes Phox2a and Phox2b during neurogenesis" Development **124**:4065-4075 (Exhibit 18);
19. Pierani, A. et al., (1999) "A Sonic Hedgehog-Independent, Retinoid-Activated Pathway of Neurogenesis in the Ventral

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Spinal Cord" Cell 97:903-915 (Exhibit 19);

20. Qiu, M. et al., (1998) "Control of anteroposterior and dorsoventral domains of Nkx-6.1 gene expression relative to other Nkx genes during vertebrate CNS development" Mech. Dev. 72:77-88 (Exhibit 20);
21. Rubenstein, J.L. et al., (1998) "Patterning of the embryonic forebrain" Curr. Opin. Neurobiol. 8:18-26 (Exhibit 21);
22. Rubenstein, J.L. et al., (1998) "Regionalization of the Prosencephalic Neural Plate" Annu. Rev. Neurosci. 21:445-477 (Exhibit 22);
23. Sussel, L. et al., (1999) "Loss of Nkx2.1 homeobox gene function results in a ventral to dorsal molecular respecification within the basal telencephalon: evidence for a transformation of the pallidum into the striatum" Development 126:3359-3370 (Exhibit 23);
24. Tanabe, Y. et al., (1996) "Diversity and Pattern in the Developing Spinal Cord" Science 274:1115-23 (Exhibit 24);
25. Thaler, J. et al., (1999) "Active Suppression of Interneuron Programs within Developing Motor Neurons Revealed by Analysis of Homeodomain Factor HB9" Neuron 23:675-687 (Exhibit 25);
26. Tsuchida, T. et al., (1994) "Topographic Organization of Embryonic Motor Neurons Defined by Expression of LIM Homeobox Genes" Cell 79:957-970 (Exhibit 26);

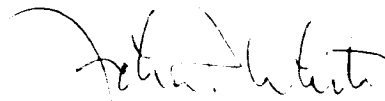
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27. Valerius, M. T. et al., (1995) "Gsh-1: A Novel Murine Homeobox Gene Expressed in the Central Nervous System" Dev. Dyn. 203:337-51 (Exhibit 27) and;
28. Weiss, J. B. et al., (1993) "Dorsoventral patterning in the Drosophila central nervous system: the intermediate neuroblasts defective homeobox gene specifies intermediate column identity" Genes & Dev. 12:3591-3602 (Exhibit 28).

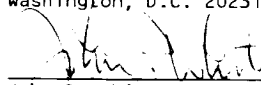
If a telephone interview would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorneys invite the Examiner to telephone either of them at the number provided below.

Pursuant to 37 C.F.R. §1.97(b)(3), no fee is deemed necessary in connection with the filing of this Information Disclosure Statement. However, if any fee is required authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

Respectfully submitted,



I hereby certify that this paper is being deposited this date with the U.S. Postal Service as first class mail addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.

  
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